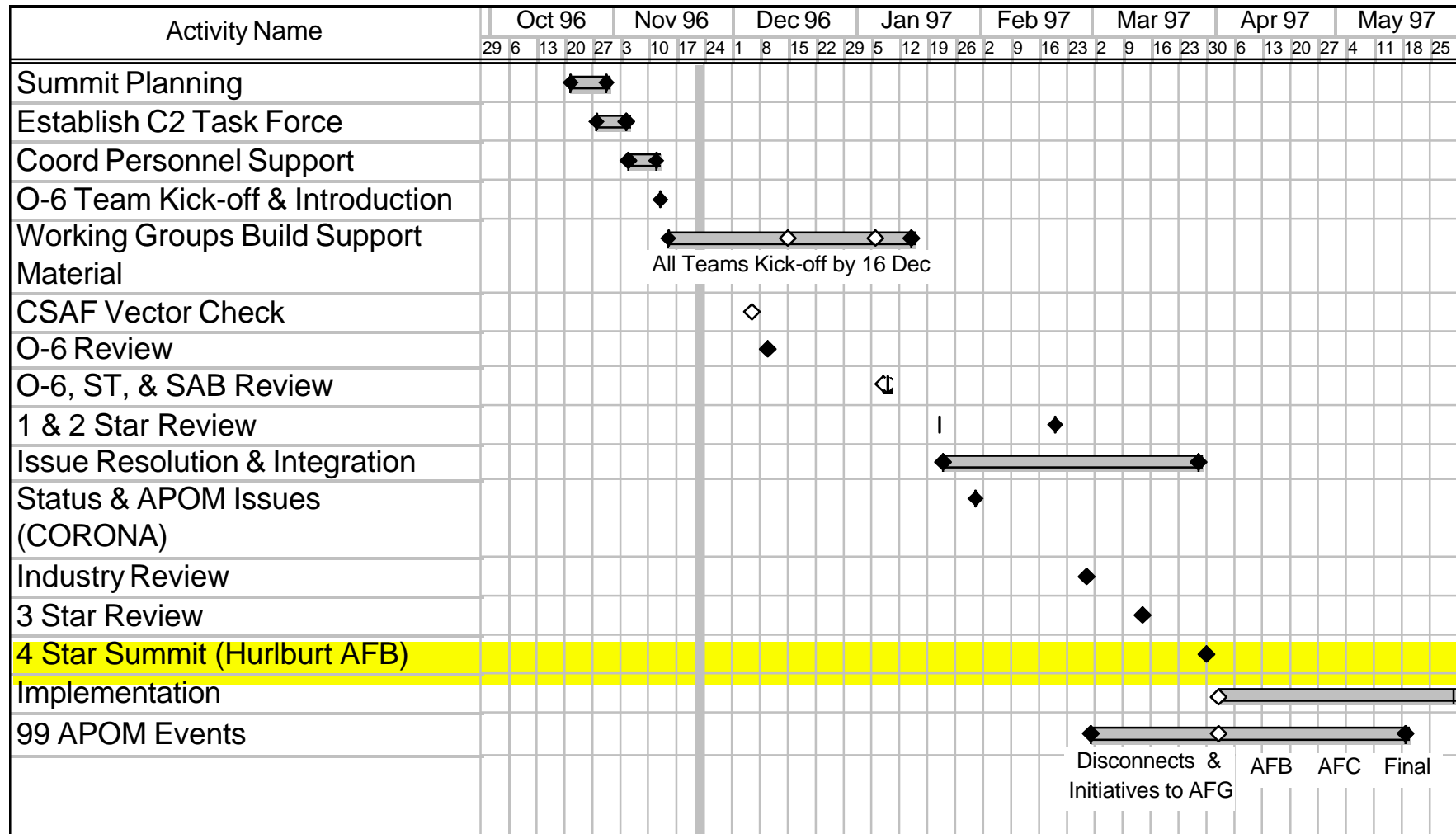


C2 Task Force Purpose

- **Refine and gain concurrence on and air and space C2 vision and implementation plan to support Joint Vision 2010 and the CSAF's strategic concept of Air Dominance**
- **Focus on three main tracks**
 - C2 Operational Concepts and Functional Definition
 - Migration and Divestiture Plan
 - Restructure of USAF institutional processes for organizing, training, and equipping C2 systems
- **Products**
 - C2 Operational and System Architecture
 - C2 Investment/Divestment Plan
 - Reengineered Process for C2 Requirements, Resource Allocation, Acquisition, Test, Training, Fielding, and Support

Vision for Aerospace C2 in the 21st Century

Schedule - Support FY99 APOM



Task Force Cadre

- **Operator-led: BGen Banholzer**

- **Full-Time Cadre**

- Command & Control: Lt Col Doss (AF/XORI)
- Air Ops: Maj Cassidy (AF/XOOC), Maj Hatcher (AF/XOFI)
- Space: Maj Taylor (AF/XOFS)
- Comm: Maj Howell, AF/SCMC
- Mod & Sim: Lt Col Snead (AF/XOMT)
- Intel: Maj Kevin Doyle (AF/INX)
- Acquisition: Maj Cristler (SAF/AQII), Maj Osgood (SAF/AQII)
- Training: TBD
- Logistics: Capt Talley (AF/LGXX)
- Admin Support: TBD

Supporting IPTs

- **Operational Concepts and System Vision IPT**
 - Personnel and Training WG
- **Modeling IPT**
- **System Migration and Divestiture Plan IPT**
 - ACTD/ATD and Exercise Integration WG
 - Technology Development WG
- **PPBS, Funding, and Financial Issues IPT**
- **Spiral Development Engine IPT**
 - Requirements Streamlining WG
 - Acquisition Streamlining WG
 - Test and Evaluation Streamlining WG
- **Test Case IPT**
- **PA IPT**

Operational Concepts & System Vision IPT

■ **Purpose**

- Develop a operational concepts for Air and Space C2 that supports global and theater level operations across a spectrum of conflict
- Describe the processes, organizations, people and supporting systems and their inter-relationships that will implement the C2 operational concepts

■ **Objectives**

- Refine strategies to task analysis for C2
- Refine future C2 operational concepts
- Build operational and systems architecture for global and theater air and space C2
- Build supporting constructs for situational awareness and information control
- Identify current deficiencies and critical technologies required to implement the system vision
- Provide inputs to Air Force and Joint doctrine for institutionalizing the C2 operational concepts
- Develop training architectures for institutionalizing the C2 operational concepts and vision for the Air Force and Joint warfighting
- Define changed and new skills mix and career paths to enable the AF to organize, train, equip, and maintain readiness in C2

Vision for Aerospace C2 in the 21st Century

Personnel and Training WG

- Purpose
 - Develop doctrinal and training architectures for institutionalizing the C2 operational concepts and vision for the Air Force
 - Define changed and new skills mix and career paths to enable the AF to organize, train, equip, and maintain readiness in C2
 - Address retention issues for high turnover career fields

Personnel and Training WG (cont.)

■ Objectives

- Develop a structure to document and train the JFACC, Air Force and Joint Service C2 personnel on C2 systems
- Develop the strategy and process for updating and maintaining C2 systems and processes using the enterprise engine as a catalyst and tool (ref: Battle Lab Task Force)
- Propose a training plan for the C2 system, accession and introductory through certification, tactical through operational employment (how do we grow “battle managers” and JFACCs)
- Develop training courses/pipelines
- Develop “built-in training” requirements for the C2 system, parallel development and training concepts, operational “help desk” ops concept
- Develop changes to career patterns as the C2 system evolves
- Identify evolution of skills mix requirements as the system evolves
- Develop retention strategies and plan for critical skills (network management, Defensive IW, etc.)

Modeling IPT

■ Purposes

- Construct plan for development and execution of modeling to support value determination and C2 investment decision making
- Build functional models of new C2 operational concepts
- Support test case IPT with analysis and modeling.

■ Objectives

- Build modeling plan
- Employ functional models of ops concepts to support migration recommendations
- Define physical architecture model
- Produce measures of effectiveness (MOE), measures of suitability (MOS), and key performance parameters (KPP)
- Assist with Test Case Analysis
- Inputs to Capstone Requirements Document (CRD)

System Migration and Divestiture Plan IPT

■ Purposes

- Construct plan for development and execution of modeling to support value determination and C2 investment decision making
- Build functional models of new C2 operational concepts
- Support test case IPT with analysis and modeling.

■ Objectives

- Build modeling plan
- Employ functional models of ops concepts to support migration recommendations
- Define physical architecture model
- Produce measures of effectiveness (MOE), measures of suitability (MOS), and key performance parameters (KPP)
- Assist with Test Case Analysis
- Inputs to Capstone Requirements Document (CRD)

ACTD/ATD and Exercise Integration WG

- Purpose

- Develop an action plan for enhancing C2 operations that allows the AF to fully leverage and exploit the ACTD process and exercises

- Objectives

- Determine how to best employ exercises
 - Determine how to best leverage existing or current ACTD/ATD/other efforts
 - Develop proposals and costs for new ACTD/ATDs

Vision for Aerospace C2 in the 21st Century

Technology Development WG

- Purpose

- Develop roadmaps for technologies required to support C2 Operational Concepts and System Vision

- Objectives

- Determine technologies required to support Operational and System Vision
 - Recommend changes to current technology management processes for monitoring developments in industry and pursuing cooperative or proxy developments with industry for commercial driven technologies
 - Determine technology roadmaps
 - Roadmaps for R&D objectives and costs of military-specific technology needs
 - Include plan for engagement with industry for commercially-driven technology

PPBS, Funding, and Financial Issues IPT

■ Purpose

- Restructure corporate process for advocating, approving, and executing resources for C2 systems in order to support an evolutionary modernization approach with a cycle time of weeks or months instead of years

■ Objectives

- Provide a corporate structure (panels, etc.) which builds, analyzes, and advocates C2 as an integrated system
- “Parallelize” the resource allocation process for new concepts and technologies to support rapid development and fielding
- Provide a funding mechanism for “seeding” new concepts and incentivizing investment
- Develop financial/accounting mechanism to provide operational advocate and corporate structure visibility into all AF C2 and C2 related expenditures
- Structure coherent integrated plan for using models, financial reporting/accounting, system engineering and integration organization, other functions and tools to support resource allocation decisions

Vision for Aerospace C2 in the 21st Century

Spiral Development Engine IPT

■ Purpose

- Propose an evolutionary process and supporting changes to corporate AF structure to drive C2 requirements and systems

■ Objectives

- Propose Spiral Development Engine processes, organizations, and costing
 - Answer the questions “How do we keep it from becoming bureaucratic?” and “How do we keep it from becoming a ‘jobs program’?”
 - Propose GOSG’s and Secretariat’s responsibilities, charter, etc.
 - Engine toolset (modeling, simulation, C2 Battle Lab, testing and evaluation, exercises)
 - Prototype(?) Engine infrastructure
 - Establish C2 System Engineering and Integration Organization
 - Methodology to test and evaluate Engine processes
 - Engine metrics

Spiral Development Engine IPT (cont.)

- Objectives (cont.)
 - Build Engine implementation plan and funding requirements
 - Plan for and prototype a National Capital Region demonstration facility
 - Define C2 GOSG responsibilities with respect to AF CIO
 - Funding requirements and PE structure for infrastructure
- Membership/Expertise
 - XO, AQ, SC, IN
 - LL, PE, FM
 - ESC, CUBE
 - AFSAA
 - Others?

Vision for Aerospace C2 in the 21st Century

Requirements Streamlining WG

- Purpose
 - Parallelize requirements definition and validation activities to support evolutionary modernization
- Objectives
 - Develop front section of Capstone ORD for C2
 - Ensure it supports all mission areas and functions
 - Define processes to streamline C2 requirements development using Spiral Development Engine
 - Define C2 GOSG interfaces with MAJCOMs, XOR, AFROC, and JROC
 - Integrate with corporate modernization planning activities (MAPs, etc)
- Membership/Expertise
 - XOR, AQ, SC, IN
 - MAJCOMs, ANG, AFR

Vision for Aerospace C2 in the 21st Century

Acquisition Streamlining WG

- Purpose

- Parallelize and develop new or modified mechanism for acquisition activities (e.g. solicitation, source selection, contracting) in order to support a dynamic, evolutionary approach to C2 modernization

- Objectives

- Define a new or modified mechanism for solicitation, source selection, and contracting (others TBD)
- Mechanism should reduce the time contribution of these activities to the development and fielding cycle to near zero, especially for commercial-off-the-shelf (COTS) based systems
- Identify where current law or DoD policy prevents the AF from fully exploiting the benefits of evolutionary acquisition.

Test and Evaluation Streamlining WG

- Purpose

- Parallelize T&E activities (development and operational) to support evolutionary modernization

- Objectives

- Develop T&E plan for conducting parallel T&E (operational and development) using the evolutionary engine
- Use modeling and simulation to streamline testing and fielding of proposed systems
- Develop test metrics, concepts, scenarios, and databases for evolutionary modernization
- Benchmark current C2 systems with Evolution Engine

Test Case IPT

- Purpose
 - Gather feedback and lessons learned on new operational concepts and Spiral Development Engine by running focused test cases through prototype Engine
- Objectives
 - Develop test cases--two or three small and focused future C2 systems or processes
 - Run these test cases through a prototype GOSG process and a number of Spiral Development Engine phases to validate concepts and capture lessons learned
 - Provide real-world feedback and lessons learned to other IPTs
- Membership/Expertise:
 - XO, AQ, SC, IN
 - ESC, CUBE
 - AFSAA, MASC
 - C2 Battle Lab
 - Others?

Public Affairs IPT

- Purpose
 - Develop and execute plan to orient AF, OSD, Joint Staff, Congress, other Services, and agency stakeholders on C2 Vision and Implementation Plan
- Objectives
 - Build PA “Campaign Plan” for publicizing vision and implementation plan and getting support from stakeholders
 - Coordinate with DoD organizations and Congress
 - Sponsor Industry Day to get feedback from industry on C2 Vision and Spiral Development Engine
 - Build glossy
- Membership/Expertise
 - PA
 - XO, AQ, SC, IN
 - LL
 - Others?